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AUTHOR	Kent, William P.
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ABSTRACT

The study summarizes a survey of a nationwide sample of students, teachers, and administrators involved in Adult Basic Education (ABE) programs funded under the Adult Education Act of 1966. Information was collected during 1971-1973 to assist in evaluating the effects of the ABE program on a priority group of students--adults from 16 to 44 years of age with less than 8 years of schooling. Students over 44 years old were excluded from the study, as were certain other specialized types of students (migrants, institutionalized students, and students in classes emphasizing English as a second language). There were approximately 500,000 students enrolled in the ABE program in FY 1970; 280,000 of these fell within the study's scope. The sample investigated by the study included 2,300 students in 200 classes, 90 programs, and 15 states. Data were collected on program and classroom characteristics; students were tested twice and interviewed three times. The interval between tests was usually four months; followup interviews were obtained at intervals of 12 and 18 months after initial interviews. Interview forms were specially developed; the test battery consisted of portions of the Tests of Adult Basic Education. (Author/RC)

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ADULT BASIC EDUCATION PROGRAMS, STUDENTS, AND RESULTS

William P. Kent

INTRODUCTION

This report is a summary of some of the main findings of a recent study funded by the U.S. Office of Education, *A Longitudinal Evaluation of the Adult Basic Education Program*. The work was directed by William P. Kent, System Development Corporation, Falls Church, Virginia; its complete final report (SDC TM-WD-5743, November 1973) is available through the ERIC Document Reproduction Service, ED 085418.

The study surveyed a nationwide sample of students, teachers, and administrators involved in Adult Basic Education (ABE) programs funded under the Adult Education Act of 1966. Information was collected during 1971-1973 to assist in evaluating the effects of the ABE program on a priority group of students—adults from 16 to 44 years of age with less than 8 years of schooling. Students over 44 years old were excluded from the study, as were certain other specialized types of students (migrants, institutionalized students, and students in classes emphasizing English as a second language). There were approximately 500,000 students enrolled in the ABE program in FY 1970; 280,000 of these fell within the study's scope.

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CHARACTERISTICS OF PROGRAMS AND CLASSES

Program Operation

The typical local program surveyed was operated by a school district and had been in existence since around 1966. Programs offered anywhere from one to 325 classes during a year, the average being 43 classes. In more detail:

- Seventy-five percent of programs were operated by school districts, 21 percent by postsecondary institutions, 2 percent by area vocational-technical schools, and 2 percent by boards of cooperative services.
- Forty-three percent of programs offered fewer than 10 classes a year, 34 percent offered between 10 and 39 classes, and 23 percent offered 40 or more classes a year.
- Twenty-six percent of programs had been in existence for less than 6 years, 57 percent for 6 or 7 years, and 17 percent for 8 or more years.

Information was requested from program administrators on whether ABE programs had "special relationships to any particular manpower program, community agency, or employer." Only 42 percent of programs were stated to have such special relationships, and a great many types were mentioned. The most frequent were:

Programs, Agencies, Employers	*Percent*
Manpower Development and Training Activities	17
Neighborhood Youth Corps	12
Work Incentive (WIN)	12
Welfare Departments	11
State Employment Service	10
Community Action Program	8
Concentrated Employment Program (CEP)	7
Hospitals	5
Vocational Rehabilitation	5

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Class Locations, Schedules, and Enrollments

Most ABE classes meet in school buildings two evenings a week, from September through May. An average class session is around three hours. Enrollment in classes in November 1971 ranged from 3 to 81; the average enrollment was 16 students.

Ninety-four percent of all classes had a regular schedule of meetings; the remaining 6 percent involved a learning center or similar activity where students attended whenever they could.

Types of meeting places were:

Types	*Percent*
Secondary School	29
Primary School	20
Adult Education Center	15
Church	7
Postsecondary School	6
Community Center	5
Vocational or Technical School	4
Business Office	3
Hospital	2
Miscellaneous	9

"Miscellaneous" meeting places included library, day care or Head Start center, YMCA, lodge, private home, and so on.

Classes began and ended in most months of the year; 23 percent of all classes were continuous, with no month scheduled for beginning or ending. The most frequent months for beginning were September (53 percent) and October (18 percent); for ending, May (39 percent) and June (24 percent).

Almost all (94 percent) of the classes had open enrollment, in the sense that students were admitted at any time of the year, regardless of the beginning of the class. Classes met from one to five days a week, the great majority (73 percent) two days a week. Only one percent of classes met on any weekend day (Saturday or Sunday).

Nearly half (49 percent) of all classes are three hours long, 37 percent are two to two and a half hours long, 4 percent are less than two hours, and 10 percent are more than three hours. The great majority (75 percent) of classes meet in the evening.

Percentages of classes with various enrollments on November 15, 1971, based on complete rosters provided by teachers, were:

Enrollment	*Percent of Classes*
3 - 9	15
10 - 14	34
15 - 19	27
20 - 29	19
30 - 81	4

Levels of Instruction

ABE classes offer instruction at many different levels, from beginning reading to high school subjects. A single class will frequently involve all grade levels from one through eight. Fifty-four percent of all classes offer instruction at the level of Grade 2 or below; only 27 percent offer no instruction below sixth-grade level. As to the highest level of instruction, 15 percent of classes offer nothing above the fifth grade, 48 percent have their highest level between Grade 6 and Grade 8, and 37 percent have their top instruction between Grade 9 and Grade 13.

Teaching Staff

A class is usually taught by a certified teacher with more than two years of ABE experience. Most teachers have received special training for ABE, but are assigned to it only part-time. Comparatively few classes (17 percent) have paraprofessional aides to assist the teacher; only 7 percent of classes have assistance from unpaid volunteers. Most teachers and about half the aides and volunteers are of the same race as the majority of their students. In more detail:

- Almost all ABE classes (89 percent) have only one teacher; 10 percent have two teachers; 1 percent have three teachers.
- Only 4 percent of teachers do not have teaching certificates; a few (about 8 percent) of the aides and volunteers have certificates.
- Seventy-one percent of teachers have more than two years of ABE experience; about one-quarter of the aides and volunteers have more than two years of ABE experience.

Teachers were asked if they had attended short or long ABE workshops or courses or inservice training sessions. A short session was defined as 12 hours or less; a long session was defined as 13 hours or more. Most classes (88 percent) had at least one teacher who had attended either a short or a long session or both.

Attendance at Training Sessions	*Percent of Classes*
One or more teachers had attended both a short and a long ABE training session	43
One or more teachers had attended an ABE training session, but a short one only	31
One or more teachers had attended a long ABE training session only	14
No teacher had attended any ABE training session	12

Nearly one-third of the aides and volunteers had attended some type of ABE training session.

Seventy-eight percent of teachers are of the same race and ethnicity as the majority of their students. Fifty-four per-

cent of aides and 41 percent of volunteers are of the same race and ethnicity as the majority of their students.

Only 21 percent of ABE teachers are assigned to ABE at least 20 hours per week. Twenty-five percent of the aides and none of the volunteers are assigned to ABE at least 20 hours per week.

Instruction—Content, Methods, and Materials

Instructional goals in ABE classes are primarily educational rather than job-related. Greatest emphasis is usually given to reading, mathematics, and spelling, but other types of goals are frequently also present. Subordinate goals include preparation for job improvement, writing, preparation for high school studies, and "life skills" (such as voting and money management).

Instructional materials and methods are almost always adapted at least to some extent to adult students, although a small percentage of classes admittedly use materials and procedures designed for school children. Instruction is very frequently individualized, with students determining their own rates of progress. Students often have some role in selecting and evaluating their goals, methods, and materials. Frequently students help instruct each other. Programmed instruction is usually not emphasized.

Although three quarters of ABE classes have some type of mechanical equipment available (usually tape recorders, filmstrip projectors, or the like), this equipment is not often used. Few classes claimed to use any type of equipment even as frequently as once a month.

Costs

Informal cost estimates were supplied by local program directors and by teachers. These figures indicate that total mean annual expenditures are around $4,000 per ABE class per year. Since the average class enrollment in November 1971 was 16 students, average total annual expenditures are $250 per enrollment at any one time, if it is assumed that student turnover maintains the enrollment of each class at a steady number.

At the local level, around 79 percent of ABE program funds are estimated to be federal, 12 percent are state, 7 percent are local (including, in some instances, contributions in facilities or services rather than in cash), and 2 percent are miscellaneous other. No student fees were charged by any of the programs surveyed.

About 60 percent of expenditures by local programs are for instructional salaries and benefits, 14 percent are for administration, 7 percent for clerical support, 5 percent for guidance and counseling, and 5 percent for books, supplies, and equipment.

As a measure of the importance attached to various non-instructional functions, program directors were asked to report funds and personnel specifically assigned to six types of activities. The best-supported of these activities was counseling and advisement, to which about 40 percent of programs devoted specific funds and personnel. The least-supported activity was postprogram placement, claimed by about 24 percent of programs. Others were student recruitment (19 percent), inservice teacher training (15 percent), program evaluation and improvement (11 percent), and community relations (4 percent).

Pay to teachers reported in 1972 averaged $6.20 per hour and ranged from $3.50 to over $11.00 per hour. The most frequent pay rate was $5.00 per hour. Paraprofessional aides were paid from 50 cents to $5.62 an hour, the average being $2.50 per hour.

STUDENT CHARACTERISTICS

Sex, Race, Language, and Age

Female students outnumbered males by 62 percent to 38 percent. Race, as determined by interviewer observation, was limited to the three categories white, black, and other. No attempt was made by interviewers to obtain a further breakdown of race. Whites (48 percent) slightly outnumbered blacks (44 percent); 8 percent were "other."

As a supplement to interviewer observation of race, teachers were asked to include, in the attendance summaries they provided, the race of each student in the sample "as reported in your State." The races and percentages so indicated were white 45 percent, black 41 percent, Spanish American 10 percent, Indian 3 percent, Oriental 1 percent.

A breakdown of sex groups by race (as observed by interviewers) shows that although whites slightly outnumbered blacks, the largest single sex-race group was black females (31 percent). White females were second (27 percent). The black male group (12 percent) was considerably smaller than the white male group (22 percent).

The language students most often spoke in their homes was English (88 percent); 9 percent spoke Spanish at home. Ten other languages were mentioned; the most frequent (still less than 1 percent each) were Portuguese, French, and Chinese.

Within the age span of 16-44 to which the study was limited, there was a slight preponderance of younger students over older students. Ages represented were: under 16 (1 percent) 16-24 (35 percent), 25-34 (37 percent), and 35-44 (27 percent).

Previous Schooling

More than half the students had previously completed nine grades or more of schooling, even though they were enrolled in studies designed primarily for grade 8 level and below. About 15 percent had high school diplomas or certificates, and a few had attended college. More specifically, the last grades of school previously completed by ABE students were:

Grades Completed	*Percent*
Below Grade 5	10
Grade 5, 6	13
Grade 7, 8	23
Grade 9, 10	30
Grade 11, 12	23
Over Grade 12	1

The great majority of students in ABE classes either finished high school (14 percent) or involuntarily dropped out of school (60 percent). Only about one-fourth (26 percent) said that when they left school, they did not want to continue. The most frequently given reasons for leaving school were having to go to work (21 percent) and marriage (13 percent).

Personal Objectives and Motivation

Motivation for coming to ABE, as reported by students, tends to be educational (69 percent) rather than job-related (31 percent). Main interests are in reading (48 percent) and working with numbers (46 percent), with comparatively small interest in writing as a separate subject for learning (6 percent).

Responses to initial interviews indicated that students' educational goals were high. All but a few (8 percent) thought they would try for a high school credential, and more than half (62 percent) thought they would attend college some time. About 70 percent intended to enroll for additional vocational or technical training.

Attendance and Turnover

At the time of initial interviews, nearly one quarter of the students had started the program more than a year previously; 13 percent had been enrolled for 3 years or more.

Almost all expected to attend class every time (40 percent) or most of the time (45 percent) in the future. There were 15 percent who expected to attend infrequently or not at all in the future, but only a few (3 percent) in this group indicated that program deficiencies were related to their lack of attendance. Major reasons for not coming included having finished ABE, attending another program, job interference, illness, and a conflict with the time at which classes were held.

Student turnover was large, even though many students attended regularly. Of students enrolled in November 1971, less than 40 percent were still attending in May 1972.

For students who were reached for follow-up interviews, approximately one-third were attending ABE classes one year after the November 1971 date used to establish this study's enrollment baseline. There had been some drop-off during the summer, down to about 25 percent attendance during August 1972. Then, after a fall increase, attendance again declined steadily during the year. However, one-fifth of the interviewees stated that they were still attending ABE classes at least once a month in May 1973, a year and a half after the enrollment baseline.

Employment Status

At the time of the study's first interviews, in February and March of 1972, 55 percent of the students were employed. For those who worked, median income was $300 a month, but there were wide variations both above and below the median. Only about one-quarter (26 percent) of the students received welfare or public assistance. Less than 20 percent had recently had serious problems in finding jobs, and almost all who were employed felt fairly secure. Most of those who were not employed believed that when they had completed the basic education program, their chances of finding a job would be significantly improved.

Figures for October 1971 can serve to illustrate job earnings of ABE students:

Monthly Job Earnings	*Percent of Students*
None	47
$1 - 200	15
$201 - 300	12
$301 - 400	12
Over $400	14

Results

The ABE students surveyed over a 4-to-18 month period changed their test scores, their opinions, and their earnings. However, the study here summarized makes no claim that these changes occurred as a result of involvement in ABE programs. The study attempted, but failed, to find causal relationships. Statistical analyses established no firm basis for maintaining that any particular features of ABE programs were more useful than any others, or even that longer attendance was more effective than short attendance. Therefore, the changes that are about to be described are "results" in the sense that they "resulted." They happened, but they are not necessarily to be attributed to instruction in ABE. They may have been caused by something else. For example, ABE programs may attract people who are ready for self-improvement. Enrollment in ABE would then be one result among others, rather than the cause of others.

Improvement in Test Scores

Students were given standardized reading and mathematics tests in January 1972 and were retested in May 1972. Average scores on initial tests showed achievement at the fifth-grade level for reading and at the sixth-grade level for mathematics. Mean gains between tests were half a grade in reading and three-tenths of a grade in mathematics. Thus in a four-month period (less than half of a usual ten-month school year), the average student gained half a year's reading achievement. The mean number of class hours of instruction between tests was 98.

Over one-fourth of the students gained a full grade or more in reading achievement during the four months between tests; nearly one-fifth gained a full grade or more in mathematics achievement. On the other hand, approximately one-third of all students made no gain at all or even lost ground during the four-month interval.

Initial Test Scores. Initial scores were somewhat related to amount of previous schooling, although most students scored at grade levels well below those which they had previously completed in school. Initial scores were also somewhat related to race, sex, and age (whites, females, and younger students tended to score higher than blacks or other minorities, males, and older students). Reading scores illustrating these differences are tabulated below:

Group	*Percent with Reading Scores at Grade 7 or Above*
All students	22
Previously completed schooling:	
Grade 6 or below	2
Grade 7 or 8	18
Grade 9 or 10	29
Grade 11 or above	35
White	31
Black	11
Other	17
Male	18
Female	23
Age under 25	28
Age 25-34	23
Age 35-44	15

Gains Between Tests. Gains were highest, on the whole, for students with the lowest initial scores. For those with initial scores below grade 5, the average gain was eight-tenths of a grade in both reading and mathematics. Gains between tests showed no clear relationship with race, age, or previous schooling. Females gained slightly more than males, even though they started at somewhat higher levels.

Gains in test scores showed no statistically significant relationships to student attendance between tests.

Some illustrative gains in reading scores:

Group	*Average Grade Level Gain in Reading*
All Students	0.5
Initial reading level:	
Below grade 5	0.8
Grade 5 or 6	0.3
Above grade 6	0.0
White	0
Black	0.5
Other	1.1
Male	0.4
Female	0.6

Gains in Employment and Earnings

From 1971 to 1973, the ABE students who were interviewed steadily increased their employment and earnings. During the last quarter of 1971, when all interviewees were enrolled in the ABE program, 58 percent had some job earnings; this increased to 70 percent 18 months later, by which time most respondents were no longer attending ABE. At the time of the first interviews, 26 percent of students were on welfare or receiving public assistance; this decreased to 22 percent in final interviews. Improvement in the earnings of those who worked was substantial, averaging a little over 20 percent during the eighteen-month interval--from a mean of $336 per month to a mean of $407 per month.

Tabulated below are figures showing details on some of these changes as reported in three interviews. The first interviews were in February and March of 1972, when most interviewees were still enrolled in ABE. The second interviews were a year later (February - March, 1973); final interviews took place after an additional six-month interval (July - August, 1973). Changes in employment and welfare status were:

	February-March 1972	*February-March 1973*	*July-August 1973*
Working Now	55 percent	63 percent	65 percent
On Welfare	26	24	22
Some Job Earnings Previous Quarter	58	66	70

Interviews showed significant gains in earnings and hourly pay for those who worked. There are several ways in which this appears in the data collected. For example, the figures on page 6 show changes in the average monthly and hourly earnings of those who worked (that is, not counting those with zero earnings in computing the averages):

	October-December 1971	*October-December 1972*	*April-June 1973*
Average Monthly Earnings (if any)	$336	$378	$407
Average Hourly Earnings (if any)	$2.28	$2.52	$2.63
Average Hours Worked Per Week (if any)	37.7	38.3	39.1

These same figures can be converted into the following rates of gain in average monthly earnings:

12-month gain, 1971-72	$42
Monthly rate of gain, 1971-72	$3.50
18-month gain, 1971-73	$71
Monthly rate of gain, 1971-73	$3.94

The gains in mean monthly earnings of $42 (for a 12-month interval) and $71 (for 18 months) are equivalent to percentage gains of 13 percent and 21 percent over the initial mean of $336.

The above figures result from looking at averages for each period of time. A different but consistent view is obtained by comparing the changes in earnings of individual ABE students from one time period to another. For example, if the earnings of each enrollee for October-December of 1971 are subtracted from the same enrollee's earnings for October-December of 1972, a mean gain per enrollee of $48 a month results. Individual changes in earnings reported for this period varied from a loss of $1,633 per month to a gain of $700 per month. Approximately 30 percent of the enrollees showed declines in monthly earnings, 4 percent showed no change, and 66 percent showed increases.

These same one-year gains show the following breakdown by race and sex:

Group	*Mean Gain in Monthly Earnings October-December 1971 to October-December 1972*	*Gain as Percentage of All Groups*
All Groups	$48	100
White	$49	102
Black	$49	102
Other	$36	75
Male	$54	112
Female	$43	90

These gains in earnings were large enough and well-enough substantiated to be almost certainly real rather than merely the result of selective reinterviewing, increases in hours of work, inflation, or other general causes of wage fluctuations.

Changes in Educational Aspirations

Follow-up interviews showed a rather surprising degree of change in students' stated educational goals. From February-March 1972 to July-August 1973, there were marked decreases in the percentages of students who thought they might enroll in high school and college programs. In initial interviews, 60 percent thought they might attend college some time; in final interviews, only 37 percent thought they might attend college. However, most students continued to plan on additional vocational or technical training. Detailed figures are:

Educational Goals	*February-March 1972*	*July-August 1973*
Might enroll (or have already enrolled) for a high school diploma	93 percent	81 percent
Might attend college some time (or have already attended)	60	37
Will get additional vocational or technical training	69	65

This drop in the percentage of those thinking about going to college may be the result of students acquiring more realistic views of their academic abilities or of the time and effort required before they could enter college.

Student Evaluations

In follow-up interviews, students were asked for their opinions of various aspects of the basic education program they had attended. They were also asked how much they believed their abilities to read, write, and work with numbers had increased during the past year. Students appeared well-satisfied with their ABE experiences. Almost all liked the methods and materials used and found their teachers helpful. Most of them also gave ABE at least some credit for job and wage improvements.

The great majority of students thought that the basic education program's methods of teaching were both different from and better than those used in the grade schools they had attended. Seventy-one percent said that ABE methods were different from grade school methods; 69 percent liked ABE either much better (40 percent) or better (29 percent) than grade school.

The teaching materials (books, tapes, and so on) used in ABE were found interesting by all but a few (4 percent) of the students. Fifty-seven percent said they were *very* interesting; 39 percent, interesting.

Student evaluations of teachers and teaching assistants were generally very favorable. Detailed ratings were:

Quality of Help in Learning	*Provided by the Teacher*	*Assistant (if any)*
Excellent	51 percent	36 percent
Good	39	49
Fair	8	12
Poor	2	3

Although 40 percent of the students spent a lot of time learning by themselves, using books or instructional materials such as worksheets or machines, most students preferred learning by working with a teacher. Students were about equally divided as to their preference for learning with a teacher individually or working with a teacher as a part of a group. Only a small minority (16 percent) preferred learning alone with books or instructional materials.

In 1973, students were asked how much they believed their abilities to read, write, and work with numbers had improved during the past year. Answers generally indicated either some or very much improvement. The least improvement was noted in writing ability. Detailed responses are shown below:

Amount of Increase during the Past Year	*In Reading Ability*	*In Writing Ability*
Very Much	49 percent	33 percent
Some	32	32
A little	14	20
Not at all	5	15

Amount of Increase during the Past Year	*In Ability to Work with Numbers*	*In Reading of Newspapers, Magazines, and Books*
Very Much	46 percent	36 percent
Some	28	33
A little	16	16
Not at all	10	15

The question "How much do you feel your experience with the basic education program helped you in your present job?" was asked in follow-up interviews. Of those working, only 25 percent believed that ABE had not helped at all. Most believed that ABE had helped very much (35 percent), or some (25 percent), or a little (15 percent).

To the question "Did anyone connected with the basic education program ever help you to find a job?" about 10 percent answered "Yes," 90 percent answered "No."

Finally, respondents who worked were asked in February-March 1973 whether they had received a pay increase since October 1971, and how much they thought ABE had helped in getting the increase. Nearly two-thirds had received increases, and nearly half of those with increases felt that ABE had helped at least a little in getting the increase.

Differential Effects

The data collected by this study were analyzed to determine relationships between various kinds of program characteristics and classroom methods, on the one hand, and effects on students, on the other. Multiple regression and discriminant analyses explored classroom variables, attendance patterns, and individual student characteristics in an attempt to find program features that would help improve either the test scores or the earnings of at least some types of students. It was thought, for example, that programmed instruction, intensity of instruction, or the use of teacher aides might show some demonstrable relationship to student improvement. However, analytic results were insufficiently clear-cut to form a reasonable basis for programmatic recommendations. No clear or convincing relationships could be discovered between program characteristics or classroom methods and the differential gains students made in earnings and in academic achievement.

This study showed that students enrolled in ABE liked the methods and materials used and found their teachers helpful. They improved their test scores significantly while they were attending, and their earnings improved substantially. The study was unable to show, however, what approaches to ABE were best for which types of students. There are two possible reasons for this failure to discover relationships. One is that complete data may have been collected on too few individuals to support statistical investigation of the large number of variables considered during the study. Another is that structured questionnaires may inevitably be incapable of getting at the most important aspects of the teaching-learning process.